

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A packet-based communication system having different speed path-rated routing devices , comprising:

at least one slow-path routing device on the network having one or more inputs to [[a]] said slow-path router that receive information packets on [[a]] the network and one or more outputs that transmit information packets onto the network, said information packets containing a slow-path identifier that identifies the packet as requiring slow-path routing;

said slow-path routing device having a first [[network]] processor on the router coupled to said inputs and said outputs, said first [[network]] processor parsing address header information in one of the information packets including examining one or more flag values in information packet and processing the information packet according to slow-path routing techniques, and transmitting the information packet to one of said outputs for directing to any other slow-path routing device on the network if said information packet possesses the slow-path routing identifier [[at least one of the flag values do not match a predetermined value indicating a requirement for additional processing of control function data for that routing device]];

at least one fast-path routing device on the network having one or more inputs to the fast-path router to receive information packets on the network, said fast path router processing information packets not having the slow-path routing identifier and said fast-path routing devices will not

parse header information or analyze the information packet according to slow-path routing requirements [[a second signaling processor on the router coupled to said first network processor, wherein said first network processor transmits an information packet to the second signaling processor if the one or more flag values match a predetermined value indicating a requirement for additional processing of control function data for that routing device; and

wherein the second signaling processor processes control function data in the information packet before transmitting the information packet to one of said outputs]].

2. (Currently Amended) The packet-based communication routing device of Claim 1 wherein the slow-path router identifier includes a flag value that contains a data element identifying a filtered router alert option.

3. (Currently Amended) The packet-based communication routing device of Claim 1 wherein the slow-path router identifier includes a flag value that identifies the type of data from the information packet to be processed by the [[second processor]] slow-path routing devices on the network.

4. (Currently Amended) The packet-based communication routing device of Claim 1 wherein the slow-path router identifier includes a flag value that identifies a condition on the routing device that will indicate[[s]] if the

information packet should be forwarded to the [[second processor]] slow-path routing devices on the network.

5. (Currently Amended) The packet-based communication routing device of
Claim 2 [[1]] wherein the flag value identifies the slow-path routing
device as an edge router.

6. (Currently Amended) The packet-based communication routing device of
Claim 2 [[1]] wherein the flag value identifies the slow-path routing
device as a gateway.

7. (Currently Amended) The packet-based communication routing device of
Claim 2 [[1]] wherein the flag value identifies the slow-path routing
device as an interface.

8. (Currently Amended) A method for routing an information packet on a packet-based communication system comprising the steps of:

receiving an information packet on an input of a slow-path router, said slow-path router having a first processor performing [[fast-path processing coupled to a second processor performing]] slow-path processing;

checking a [[flag]] slow-path identifier value in the information packet at [[a]] the first processor to determine if the information packet requires slow-path processing on [[a the second]] the first processor;

analyzing the packet according to the slow-path routing requirements if the slow-path identifier value is a predetermined value;

forwarding the information packet to an output on the slow-path router for transmission [[onto the network]] to any other slow-path routers on the network if the information packet has said slow-path identifier

receiving an information packet on an input of a fast-path router, said fast-path router having a second processor performing fast-path processing;

checking a slow-path identifier value in the information packet at the second processor to determine if the information packet requires slow-path processing on the network;

forwarding the information packet to an output on the fast-path router for transmission to any other slow-path routers on the network if the information packet has said slow-path identifier

[[if the flag value does not match a predetermined value indicating requiring slow-path processing;
forwarding the information packet to the second processor for slow-path processing of control function data in response to a match of the flag value to said predetermined value; and
forwarding the information packet from the second processor to said output for transmission onto the network after said slow-path processing is completed.]]

9. (Currently Amended) The method for routing an information packet on a packet-based communication system of Claim 8 wherein the slow-path identifier [[flag]] value contains a data element identifying a filtered router alert option.

10. (Currently Amended) The method for routing an information packet on a packet-based communication system of Claim 8 wherein the slow-path identifier [[flag]] value indicates the portions of the information packet that require processing at the second processor.

11. (Original) The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:
processing the information packet on an edge router.

12. (Original) The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the steps of:
processing the information packet on a gateway.

13. (Original) The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:
processing the information packet on an interface

14. (Original) The method for routing an information packet on a packet-based communication system of Claim 8 further comprising the step of:
processing the information for use by an application.

15. (Currently Amended) A method for routing an information packet on a packet-based communication system comprising the steps of:

receiving an information packet on an input of a router;

checking a slow-path identifier [[flag]] value in the information packet at a first processor in [[the]] a slow-path router to determine if the information packet requires higher-level processing [[on a second processor]];

forwarding the information packet to an output on the slow-path router for transmission onto any other slow-path routers on the network if the slow-path identifier value indicates the need for high-level processing by said slow-path routers [[flag value does not match a predetermined value]];

[[forwarding the information packet to a second processor in the router for higher-level processing in response to a match of the flag value to said predetermined value indicating a requirement for higher-level processing;]]

forwarding the information packet from the second processor to said output for transmission onto the network after higher-level processing is completed;]] and

retrieving specific control function data from the information packet during the higher-level processing.

16. (Currently Amended) The method for routing an information packet on a packet-based communication system of Claim 15 wherein a slow-path identifier [[filtered router alert]] includes a type data field and a flag value data field.

17. (Original) The method for routing an information packet on a packet-based communication system of Claim 15 comprising the step of:
forwarding the retrieved data for use on an interface.

18. (Original) The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:
forwarding the retrieved data for use in an application.

19. (Original) The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:
forwarding the retrieved data for use on a gateway.

20. (Original) The method for routing an information packet on a packet-based communication system of Claim 15 further comprising the step of:
transmitting the retrieved data onto the network.